

Art Unit: 2613

CLMPTO

09/870300

1. (Currently Amended) A system for receiving and processing MPEG data comprising:

a digital tuner for receiving a data channel containing an MPEG coded data stream;

a decoding system including:

a frequency converter module disposed to transform frequency coefficients in the MPEG coded data stream to a spatial domain to obtain spatial domain data associated with the MPEG data,

a subsampling module for subsampling the spatial domain data by a selected factor to generate subsampled spatial domain data, wherein subsampling the spatial domain data includes weighting color parameters of at least first and second spatial samples using at least first and second weighting factors, respectively, and summing the weighted color parameters of the at least first and second spatial samples to generate a color parameter of a subsample that corresponds to the at least first and second spatial samples, and

a motion vector module disposed to receive motion vector and reference image data in the MPEG coded data stream, ~~the decoding system configured and~~ to process a reference frame and motion vectors of the MPEG data to generate predicted frame data;

a first summer for adding the predicted frame data and the subsampled spatial domain data to generate first video images encoded in a reduced volume of video data; and

a frame buffer disposed to buffer frames of the first video images.

2. (Original) The invention as recited in claim 1, wherein the MPEG coded data is capable of being decoded to produce video images in a first video resolution that is greater than a second video resolution, the first video images having the second video resolution, the invention further comprising:

a display device configured to display video in the second video resolution, the display device coupled to the frame buffer so as to display the first video images.

3. (Original) The invention as recited in claim 2, wherein the display device comprises a standard television monitor.

4. (Currently Amended) The invention as recited in claim 2, wherein the display device is a first display device, the invention further comprising:

a second display device configured to display video in the first video resolution; and

wherein the system is further configured to add a second summer for adding the predicted frame data and non-subsampled spatial domain data to generate second video images formatted for display in the first video resolution on the second display device, wherein the second video images are displayed on the second display device in the first video resolution.

5. (Original) The invention as recited in claim 4, wherein the second display device comprises a high definition television.

6. (Original) The invention as recited in claim 4, wherein the first display device and the second display device are components of a picture-in-picture display device, the first display device configured to display the first video images have the second video resolution in a reduced-size window of the picture-in-picture display, the second display device configured to display the second video images in the second video resolution outside of the reduced-size window of the picture-in-picture display.

7. (Currently Amended) The invention as recited in claim 1, further comprising:
a display device configured to display video in the first video resolution; and
wherein the system is further configured to add a second summer for adding the predicted frame data and non-subsampled spatial domain data to generate second video images formatted for display in the first video resolution on the display device, wherein the second video images are displayed on the second display device in the first video resolution.

8. (Original) The invention as recited in claim 7, wherein the display device comprises a high definition television.

Claims 9-22 are cancelled